

Example 1

5 pounds of chlorine in 7 million pounds of water equals what concentration in ppm?

Example 2

5 pounds of chlorine in 200,000 pounds of water equals what concentration in ppm?

Example 3

6 pounds of chlorine in 15,000 gallons equals what concentration in ppm?

Example 4

Theoretically, how many pounds of pure chlorine must be added to 900,000 gallons of water to produce a residual of 2.0 ppm?

Example 5

Your well pumps at 200 gpm and you desire a chlorine residual of 0.5 ppm. How much chlorine gas do you need per day?

Sample 1

10 lbs of chlorine in 100,000 lbs of water equals what concentration in ppm?

Sample 2

If 42 lbs of chlorine are added to 4,000,000 gal of water, what is the concentration of chlorine?

Sample 3

100,000 gallons of water receives 1 pound of chlorine. What is the chlorine concentration?

Example 6

How many pounds of chlorine are in 4 pounds of a compound that has 65% available chlorine?

Example 7

How many pounds of chlorine are in 5 gallons of solution that weighs 10.4 pounds per gallon and has 10% available chlorine? Sometimes the compound that contains the desired chemical is a liquid. Before the amount of available chemical is determined, the weight of the compound must be calculated.

Sample 4

How many pounds of chlorine are in 9 gallons of a solution that weighs 10 pounds per gallons and has 5% available chlorine?

Sample 5

How many pounds of chlorine are in 6 gallons of a solution that weighs 10 pounds per gallon and has 12% available chlorine?

Sample 6

If your demand is 0.5 ppm and you desire a chlorine residual of 1.0 ppm, what is your dose?

Sample 7

If a system pumps 100,000 gpd (gal/day) and feeds 2.0 ppm of chlorine, how many gallons of 10% sodium hypochlorite will be used in a day? How many gallons of 5% sodium hypochlorite? (Assume 5% and 10% sodium hypochlorite weigh 10 lbs/gal)

$$ppm = \frac{\text{lbs of chemical}}{\text{million lbs water}} \quad \text{OR} \quad \text{lbs of chemical} = ppm \times \text{million lbs water}$$

$$100,000 \text{ gal} \times \frac{8.34 \text{ lbs}}{\text{gal}} = 834,000 \text{ lbs of water}$$

$$834,000 \text{ lbs of water} = 0.834 \text{ million lbs water}$$

$$0.834 \text{ million lbs of water} \times 2.0 \text{ ppm} = 1.67 \text{ lbs of chlorine}$$

For 10% sodium hypochlorite :

$$1.67 \text{ lbs of pure chlorine} \times \frac{100 \text{ lbs compound}}{10 \text{ lbs pure chlorine}} = 16.7 \text{ lbs 10\% sodium hypochlorite}$$

$$16.7 \text{ lbs 10\% sodium hypochlorite} \times \frac{1 \text{ gal}}{10 \text{ lbs}} = 1.67 \text{ gallons}$$

For 5% sodium hypochlorite :

$$1.67 \text{ lbs of pure chlorine} \times \frac{100 \text{ lbs compound}}{5 \text{ lbs pure chlorine}} = 33.4 \text{ lbs 5\% sodium hypochlorite}$$

$$33.4 \text{ lbs 5\% sodium hypochlorite} \times \frac{1 \text{ gal}}{10 \text{ lbs}} = 3.34 \text{ gallons}$$

Sample 8

If a system pumps 75,000 gpd and feeds 3.1 ppm of chlorine, how many gallons of 12% sodium hypochlorite will be used in a day? (Assume 12% sodium hypochlorite weighs 10 lbs/gal)

Sample 9

If a well pumps at a rate of 200 gpm and the chlorine residual is 0.5 ppm. If your demand is 2 ppm, how many gallons of 10% sodium hypochlorite will be used per day? (Assume the solution weighs 10 lbs/gal)